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Editor - Captain L. B. Marshall, MC, USN (RET)

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Policy

The U. S. Navy Medical News Letter is basically an official Medical Department publication inviting the attention of officers of the Medical Department of the Regular Navy and Naval Reserve to timely up-to-date items of official and professional interest relative to medicine, dentistry, and allied sciences. The amount of information used is only that necessary to inform adequately officers of the Medical Department of the existence and source of such information. The items used are neither intended to be nor susceptible to use by any officer as a substitute for any item or article in its original form. All readers of the News Letter are urged to obtain the original of those items of particular interest to the individual.

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Notice

Due to the critical shortage of medical officers, the Chief, Bureau of Medicine and Surgery, has recommended, and the Chief of Naval Personnel has concurred, that Reserve medical officers now on active duty who desire to submit requests for extension of their active duty for a period of three months or more will be given favorable consideration.

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Residency Training in the Navy

Applications for residency training are requested from Regular officers and those Reserve officers who have completed their obligated service under the Universal Military Training and Service Act, as amended. Reserve officers with obligated service may become eligible for training upon transfer to the Regular Navy.

Training is available for Regular officers in all of the major medical specialties. It is available for Reserve officers in Pathology, Orthopedic Surgery, Obstetrics and Gynecology, Pediatrics, Urology, Anesthesiology, Otolaryngology, Dermatology and Syphilology, Ophthalmology, and Internal Medicine.

Members of the current intern class who are eligible and have been accepted for training may start their residency immediately on completion of their internship. It is now the desire of the Bureau of Medicine and Surgery to continue a resident in training without interruption until he has completed the formal training requirements leading to certification by an American Specialty Board. This procedure will be strictly adhered to in every case where the demands of the service permit, and providing the officer shows satisfactory progress. (ProfDiv, BuMed)

Mass X-Ray Screening for Lung Cancer Control

Not only professional, but lay attention, has been focused on the problem of lung-cancer control in recent years. There is evidence that the incidence of lung cancer is markedly on the upswing.

With the authenticated growth in lung-cancer cases, both in the United States and in foreign countries, there has developed a sometimes nearly hysterical apprehension toward the possible role which smoking plays in its cause. The controversy has spilled into the newspapers and lay magazines, and has been reflected in the depression of certain securities on the stock exchange. Somewhat confused by conflicting reports, but, thoroughly aroused and aware of the importance of lung cancer, the American public is ready to embrace any reasonable approach to the problem. Already accustomed to visiting their dentists twice a year, and inoculated with the idea of cancer-detection examinations, a substantial segment of the population would be more than willing to submit to any reasonable addition to the preventive formula if it could be assured that this offered effective protection against lung cancer.

With tuberculosis roentgenographic-screening procedures already in existence, it required little imagination--if considerable initiative--to extend the concept of suspect screening to include chest tumors. Several such extensions of the mass chest roentgenographic survey to include pulmonary neoplasms, were initiated in 1948 and 1949. The largest to date--carried out in Los Angeles County in 1950--included 1,867,201 persons, or 45% of the entire population of that county. Four years later, it seems not only appropriate but imperative to review the record to see if such a program is, in any way, the lung-cancer control measure many hope it may be.

Of the 1,867,201 chest minifilms taken during the Los Angeles County X-Ray Survey in 1950, 3500 were regarded as constituting chest neoplasm suspects and were incorporated in a "Chest Tumor Registry" for purposes of study and follow-up. More than four years have elapsed since the inception of the survey and a minimum three-year follow-up period on all cases is now available for review.

The minifilm survey included a representative cross section of the population of the county. Careful review of the data fails to show bias in regard to sex and race, or whether the patient suspected was free of, or a bearer of, thoracic disease. The age distribution, however, shows some excess of younger adults. If corrections are made for this latter factor, the survey findings seem to be representative of the Los Angeles County population.

The group of 3500, included in the registry, represents a chest-tumor suspect frequency of 190 per 100,000 surveyed, higher than in most similar surveys, but this is apparently due only to a higher index of suspicion. A "suspect" group may be expected to contain about equal numbers of males

and females in contrast to the marked preponderance of males in final, proved bronchogenic-carcinoma cases.

Despite the fact that the suspects were not told they might harbor chest tumors, but only that "some abnormality" existed, most sought medical care. Whereas 40% had diagnoses established in less than 3 months, an additional 37% required up to a year, 20% up to two years, and the remainder more than two years. Any delay in diagnosis of more than 3 months should probably be regarded as disastrous in the case of bronchogenic carcinoma.

Although the total yield of bronchogenic carcinoma was 213 cases, actually 754, or nearly a fourth of the suspects, proved to have neoplasms, benign and malignant. In addition, 457 had goiters, 379 tuberculosis, and others had miscellaneous conditions so that only 20% had no significant thoracic lesion. Of those persons with discovered disease, 60% were aware that it existed prior to the survey. On the other hand, the majority of malignant and benign neoplasms, tuberculomas, diaphragmatic hernias, et cetera--conditions curable by surgery--were discovered as a result of the survey. There were 117 major operations for extrathoracic neoplasms and other conditions, 89% of which were discovered through the survey, with an operative mortality of less than 4%; 42 thyroidectomies were performed without an operative death. The fact that 87% of the 96 persons, found to have pulmonary metastases, were aware of their difficulty prior to the survey, merely serves to refute the charge that those with symptoms or fear of cancer will avoid roentgenographic surveys.

The group of 293 with roentgenographic evidence of chest neoplasm, but who were deemed "clinically benign" because of long history or because they were asymptomatic, will be followed with special interest. The length of the silent phase of bronchogenic carcinoma is undoubtedly markedly variable and little is yet known about it.

The 213 bronchogenic carcinomas represent 6.1% of the entire chest registry; 80% of these were discovered by the survey, and, of those coming to surgery in a stage favorable for cure, 97% were found by roentgenographic screening. It must then be conceded that, if bronchogenic carcinoma is to be operated upon in its curable phase, this must be done in the silent stage when detectable only by routine roentgenograms. That the roentgenographic-survey method is effective in screening suspects with potential bronchogenic carcinoma is indicated by the fact that only 27 persons who had negative films reported in the survey, died of bronchogenic carcinoma that year, while 213 were discovered. Most of these 27, missed in the survey, probably did not yet have radiographically discernible lesions at the time of the single minifilm. This suggests that to achieve the greatest protection, films should probably be taken twice a year.

The major defect in the voluntary roentgenographic survey method is that it screens a cross section of the population with the result that 67%

of all the films are of persons less than 45 years of age who bear but 9% of the lung cancer. To be effective, from a lung-cancer control standpoint, it should be restricted to those more than 45 (with a lung-cancer survey frequency of 33 per 100,000 in Los Angeles County) or, perhaps, by excluding all females, concern itself only with males more than 45 with their survey frequency of 55 per 100,000. In this way, the yield of lung cancer could be increased from 4 to 5 times without increasing the number of films taken. The higher the incidence of lung cancer in any given locality, the greater the return in discovered cases, and, in an area like Philadelphia with a reported roentgenographic-survey rate of 260 per 100,000 in males more than 45 years of age, the yield would be tremendous. The cost of such a selective survey would be proportionately cut, and in this way, the over-all cost of \$6220 for each lung cancer found in the Los Angeles survey, could be reduced to around \$300 when found with the frequency reported from Philadelphia.

An operability rate of 53% existed in the group of bronchogenic lesions, and an operative mortality of 7.1%. The resection rate of 75% of those operated upon, or 40% of the total group, is higher than most although these figures include 15 palliative resections.

Seventy curative resections (50 pneumonectomies and 20 lobectomies) had an operative mortality of 10%. Of the determinate cases, 35.8% are alive and free of cancer three years later. The absolute three-year cure rate, based on all cases whether treated or not, is 11.3%.

The survey method is, admittedly, relatively expensive. No one knows the worth of a life saved. If it should happen to be one's own life, most would be willing to pay dearly for it. The only way, at present, to cure lung cancer, is to operate in the silent or preclinical phase, and the only method at present to detect bronchogenic carcinoma while silent is by roentgenographic survey. It seems more practical to foot the bill for the survey and cure a reasonable percentage of the patients discovered than to wait until symptoms appear, proceed through the same expensive measures of diagnosis and surgical treatment, and then have few or no cures to show for the effort and money involved. Until a better method is at hand, survey detection followed by prompt surgery appears to be the only answer to the lung-cancer problem. (Guiss, L. W., Mass Roentgenographic Screening as a Lung-Cancer-Control Measure: *Cancer*, 8: 219-235, March-April 1955)

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Please forward requests for change of address for the News Letter to: Commanding Officer, U. S. Naval Medical School, National Naval Medical Center, Bethesda 14, Md., giving full name, rank, corps, and old and new addresses.

Diffuse Indolent Pulmonary Tuberculosis

When the lungs become the site of an active tuberculous infection, the character of the tissue reaction is dependent upon a balance between the size of the inoculum and the virulence of the offending organisms, on the one hand, and the various elements of host resistance, on the other. The pathologic changes may vary from those of an acute pneumonic process, which presumably represents intense exudation in a hypersensitive host, to the opposite extreme of an almost exclusively productive response.

In its early or localized form, this productive type of tuberculosis presents an appearance not unlike the fibronodular residuals of healing exudative lesions. When discovered, usually on routine examination, a roentgenographic diagnosis of arrested tuberculosis is often made. Not infrequently, however, if the modifying factors are appropriate, the process does not remain localized but gradually seeds its way throughout both lungs in a slow, insidious manner. Eventually, the process reaches an extensive, diffuse, and usually symmetrical distribution. A clinicopathologic entity results which has been comprehensively described by Ornstein, Ulmar, and Dittler under the specific heading, "chronic productive tuberculosis." This form of tuberculosis is as characteristic as the caseous pneumonic or miliary phases of the disease.

While it is apparent that the term "chronic productive tuberculosis" is quite accurate from a strictly pathologic standpoint, unfortunately, some uncertainty concerning its exact implications exists. Therefore, the present writers propose the term "diffuse indolent pulmonary tuberculosis" to designate the clinical form of tuberculosis in question.

Diffuse indolent, or chronic productive pulmonary tuberculosis is characterized by a tissue response which is almost exclusively productive. The productive reaction consists of the formation of a specific type of granulation tissue which is primarily composed of the epithelioid tubercle which is familiar as the basic tissue change in tuberculous lesions. The tubercle, which is not unlike a small benign tumor, is made up of a solid focus of epithelioid cells, Langhans' giant cells, a peripheral border of lymphocytes, a few polymorphonuclear leukocytes, and the later development of a surrounding zone of fibrous tissue.

Extension of the process proceeds slowly over a period of many years and occurs as the result of temporary episodes of caseation with contiguous seeding into the surrounding tissues or through connecting bronchioles. Occasional brief and mild episodes of exudation take place and account for the clinical flareups which occur in the course of the illness. On rarer occasions, the exudative phase suddenly becomes dominant and the disease process then converts to a caseous pneumonic form of tuberculosis.

As with other types of tuberculosis, the initial infiltrate is most likely to occur in the upper portions of a lung, usually in the apex. Except for intermittent periods of stability, the infection then gradually, but relentlessly, spreads toward the base. During the course of the disease, the opposite lung becomes involved. Again, the apex is likely to be first affected, and the process creeps slowly caudad in a halting manner, so that late in the course, there is likely to be a diffuse bilateral distribution of the fine, nodular lesions. The presence of the chronic insult for a period of years eventually results in fibrosis and emphysema, with resultant pulmonary hypertension and, perhaps, failure of the right side of the heart.

In its classical form, the clinical picture of diffuse indolent pulmonary tuberculosis is far different from that which is usually associated with other types of advanced pulmonary tuberculosis. Symptoms are characteristically minimal, or completely lacking, even late in the course of the disease. Probably because a long period is required for sufficient complaints to evolve and provoke the patient to seek medical advice, the disease is seen predominantly after the fourth decade of life. The discovery of the process at this time is often the result of a fortuitous roentgenographic examination performed during some routine evaluation. Careful inquiry may elicit a history of mild cough of long duration, but usually very little more. Physical examination is likewise not particularly helpful. A few fine apical rales may be detected, and evidence of pulmonary emphysema may be present, but more frequently, physical findings are inconclusive or entirely absent. The tuberculin reaction is but weakly positive, denoting a low degree of sensitivity. Sputum is characteristically scanty and only occasionally does it contain tubercle bacilli. This dearth of organisms may render twenty or more negative sputum examinations before a positive specimen is encountered. In particularly difficult instances, a bacteriologic diagnosis can usually be established by cultural methods or guinea pig inoculation of concentrated sputum specimens and gastric washings. Even these procedures, however, may require many repetitions before a positive result is obtained.

The indolent course is sometimes punctuated by mild clinical flareups manifested by low-grade constitutional and respiratory symptoms and a greater ease of demonstration of tubercle bacilli. Following these episodes, which are characteristically of short duration, bacilli once again become scanty and there remain few or no outward evidences of disease despite progressive pulmonary dissemination.

Over a period of twenty years or more, complicating bronchitis and emphysema may become manifest and cause an irritating cough or exertional dyspnea. Cyanosis and fatigability may reflect an underlying hypoxia. Death from this type of tuberculosis is usually due to sudden conversion to an exudative form, occurring either singly or in combination with *cor pulmonale*, or respiratory insufficiency resulting from emphysema and fibrosis. Even

though the chances for a relatively long life span are good, either with or without therapy, the ultimate prognosis is poor because the disease, in most cases, is gradually progressive. Hemoptysis, in single or repeated bouts, has been noted with some frequency by others, but has been unusual in the writers' experience, as has the development of extrapulmonary foci.

The introduction of specific chemotherapeutic agents has necessitated a definite revision of the concept of management and prognosis. Although the response of diffuse indolent tuberculosis to antimicrobial agents is anything but dramatic, it has been the writers' experience that some improvement can be expected in almost every case in which streptomycin-PAS is employed. The writers' practice has been to combine chemotherapy with relatively short periods of bed rest, and pneumoperitoneum has frequently been utilized as an adjunctive measure, even though the value of this form of collapse has not been separately established.

It is to be emphasized that the therapy, as discussed, will only occasionally result in marked regression of the pulmonary lesions; however, some degree of improvement, or at least an arrest of the progression of the disease, can nearly always be expected. While the latter response falls far short of an ideal result, it at least affords promise of avoiding the crippling effects of late emphysema and fibrosis and greatly improves the over-all prognosis. None of the writers' patients received streptomycin-PAS for periods longer than five and one-half months. It seems probable that longer courses of chemotherapy and the use of isoniazid might further brighten the outlook. (Buechner, H. A., and Anderson, A. E., Diffuse Indolent Pulmonary Tuberculosis: Am. Rev. Tuberc., 71:503-507, April 1955)

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Gold-Hormonal Therapy in Rheumatoid Arthritis

Since the introduction by Hench of cortisone and corticotropin to clinical medicine, the value of these agents in certain acute disorders has been widely accepted. Their helpfulness, and, at times, lifesaving nature are recognized. When they are administered for short periods, the problem of toxicity or adverse physiologic effects of these hormones is minimal and is usually greatly overbalanced by their beneficial effects. However, in the treatment of a chronic disorder, such as rheumatoid arthritis, where continued administration of the potent physiologic agent is required in order to maintain its benefits, the clinician is forced to ask himself the question: Am I likely to do more harm than good by using this drug?

On the premise that it is generally desirable to limit the administration of cortisone to relatively short-term periods, especially in patients who require over 50 mg. per day for the adequate control of their symptoms, a study was begun, in 1950, of combined gold-cortisone therapy in severe

rheumatoid arthritis. The desire was to determine whether the combined use of these two anti-rheumatic drugs offered any advantage over the use of each alone. Of particular interest was the relapse rate following the cessation of cortisone and the continuation of gold. Chrysotherapy, it was postulated, might lessen the need of prolonged cortisone therapy in some patients.

Fifty patients were given gold in combination with hormone therapy. Forty-one patients were given a minimum of 500 mg. of gold salt and were followed for at least three months after the cessation of hormone therapy. These 41 cases constitute the basis for the authors' conclusions concerning the effectiveness of combined gold-hormone treatment. Clinical details of these patients are included. Nine patients did not meet these minimal criteria.

Seventeen percent of the patients maintained a complete remission of their disease; an additional 39% showed major improvement. Twelve percent showed moderate improvement, and 32% maintained little or no improvement on gold after the hormone was stopped. These results closely approximate those obtained following the use of gold alone.

The incidence of gold reactions was 46%. In 34%, gold was discontinued because of toxicity. Hormone therapy does not lessen the need for the usual precautions when gold salts are used.

Combined therapy offers a practical means of treating the severe active rheumatoid arthritic. Cortisone, hydrocortisone, or corticotropin can be used to suppress the disease for several weeks to months while the gold depot is being built up. The hormone can then be discontinued with the expectation of obtaining the same therapeutic result as if gold alone were administered. Patients, not showing a favorable response to the combined program, can be treated by long-term maintenance on small doses of hormone, or by an intensification of the usual conservative measures of established value in the care of the patient with rheumatoid arthritis. (Bilka, P. J., and Weil, M. H., Gold-Hormonal Therapy in Rheumatoid Arthritis: Ann. Int. Med., 42: 638-643, March 1955)

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Continuous Use of Diamox

Thirty ambulatory patients with edema secondary to congestive heart failure, nephrotic syndrome, and venous insufficiency, were given Diamox for periods ranging from 1-1/4 to 8-1/2 months, with the exception of 2 subjects to whom the drug was administered for only 4 to 7 days. The average duration of therapy was 4 months. There were 12 males and 18 females ranging from 19 to 79 years. The average age was 58.7 years. The diagnoses represented in the group included hypertensive heart disease

in 11 patients, arteriosclerotic in 10; syphilitic heart disease in 3, thyrotoxic heart disease in one, congenital heart disease in one, rheumatic heart disease in one, nephrosis in 2, and femoral venous insufficiency in one.

Of the patients with heart failure, all 27 had been maintained on digitalis, mercurial diuretics, ammonium chloride, and low-salt diet for periods usually greater than one year. Diuretics and ammonium chloride were withdrawn at least 4 to 5 days prior to the initiation of Diamox. However, no changes were made in the dose of digitalis, in diet, or in any other feature of their regimen.

The patients were seen weekly or bi-weekly at which time the following determinations were made: weight, degree of edema, condition of the lung bases, subjective symptoms of heart failure, urinalysis, and blood urea nitrogen. Serum electrolyte values were determined serially before and at the completion of the 3 to 5-day courses of Diamox, one to 6 times per subject. Inquiry was made concerning the occurrence of side effects at each visit.

The daily requirement was determined according to the patient's response to an initial 250 to 750 mg. given orally in one dose in the morning for periods of 3 to 5 days weekly. In more than one-half of the subjects, Diamox was given daily for 10 days or more, in order to compare the results of continuous regimen with those during interrupted courses of 3 to 5 days. Diamox was used as the sole diuretic as long as edema and symptoms were controlled.

Diamox is a potent inhibitor of the enzyme carbonic anhydrase which is present in large quantities in erythrocytes, gastric mucosa, renal cortex, and, in lesser concentrations, in other body tissues. However, its enzymatic action apparently is not totally abolished by Diamox, presumably due to the abundance of the enzyme. Insofar as the renal tubules are concerned, it is impossible to inhibit all of their acid production as the uncatalyzed reaction continues to take place. The inactivation of carbonic anhydrase in the stomach does not seem to be of untoward clinical significance. The anorexia which occurred in two subjects may have resulted from decreased acid secretion in the stomach, although it subsided in spite of continued treatment.

The diuretic potency of Diamox was striking in some subjects; one patient lost 17 pounds in 3 days on one occasion, and 26 pounds in 7 days on another. Weight loss of 5 to 7 pounds in 3 to 5 days was not uncommon, especially in subjects with two-to three-plus ankle edema. Belsky stated that Diamox had little effect in the presence of anasarca. A more abundant diuresis was observed in patients with anasarca of recent origin, while chronic anasarca due to long-standing congestive failure associated with fixed hepatomegaly and ascites was generally refractory.

Diamox was administered orally to the 30 ambulatory patients with edema for periods of 1-1/4 to 8-1/2 months. The results were good to excellent with maintenance of satisfactory cardiac compensation in 19 (63.6%) of the 30 subjects. The response was usually less satisfactory in patients with long-standing and recurrent right-sided heart failure and fixed hepatomegaly. Side effects occurred in 9 subjects and were severe enough to require discontinuance of the drug in 2 of the 9.

The authors believe that Diamox is a safe and effective oral diuretic for use in ambulatory patients. It may be useful in combating edema of the nephrotic syndrome and may have a place in managing edema due to venous insufficiency. (Massumi, R. A., and Evans, J. M., Studies on the Continuous Use of a Carbonic Anhydrase Inhibitor (Diamox) in Ambulatory Patients: Am. Heart J., 49: 626-632, April 1955)

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Posterior Dislocation of the Shoulder

Posterior dislocations of the shoulder may be classified under three types. First, that of rotational subluxation when the head of the humerus rests on the posterior portion of the glenoid rim, the head pointing posteriorly and the tuberosities anteriorly. This is the mildest but most insidious type. Second, the subacromial, or retroglenoid type of dislocation, which is of second degree intensity. Third, the subspinous type which is the complete posterior dislocation.

The most important single cause of posterior dislocation is trauma, usually direct on the flexed adducted and internally rotated arm. It may also occur as a result of direct trauma to the anterior aspect of the shoulder or subsequent to epileptic seizures or shock therapy. In the chronic recurrent cases, mere dangling of the arm in flexion and adduction, such as in reaching over to pick up a piece of paper, may produce a dislocation. There may also be contributing congenital factors, such as deformity of the glenoid due to increased concavity or decrease in the size or degree of normal obliquity. Relaxation of the capsule and retroversion of the humeral neck must also be considered.

With posterior dislocation of the shoulder, there is usually pain and disability with the arm held in adduction and internal rotation, although in the subspinous type, a degree of abduction may be present. There is flattening of the anterior aspect of the shoulder with prominence of the acromion and acromio-clavicular joint and the coracoid process. External rotation is the most consistently lost function, although in the acute cases, all motions may be very limited and painful. There is prominence of the head posteriorly, especially in the subspinous type. This is not so prominent in the rotational subluxation or the subacromial types, especially if

there is a large amount of hemarthrosis present. Usually, there are no associated neurologic or vascular changes, although in the subspinous type of dislocation, damage to the axillary nerve may be present.

Treatment of the acute posterior dislocation consists of reduction under general anesthesia by traction and rotation, usually external, with direct forward pressure over the displaced head. In all cases in which closed reduction was attempted, it was easily accomplished. However, in certain cases of acute posterior dislocation, as with anterior dislocation, it may be necessary to operate because of the interference of the long head of the biceps.

Immobilization is the same as for anterior dislocation, except that in certain instances, immobilization in external rotation may be necessary for stability. In the posterior recurrent dislocation, operation is the treatment of choice. It may consist of one or a combination of the following, such as transposition of the infraspinatus and teres minor tendons antero-inferiorly, reefing of the capsule, posterior bone block especially if the defect in the head is present, Nichola operation, fascial and sling repairs, or transposition of the subscapularis tendon to the defect in the humeral head. In any one of these, wire transfixion advocated by McKeever and Wilson may be employed. In this procedure, two wires criss-cross from the acromion into the humeral head and are allowed to remain for a few weeks.

Of the foregoing operations, the transpositioning of the infraspinatus and teres minor tendons, plicating of the capsule, and the use of a posterior bone block, if a defect in the humeral head is present, have been the procedures of choice.

In the chronic, permanently dislocated shoulder in which a false glenoid has formed, shoulder motions may be within normal limits with the exception of external rotation, which is markedly limited and may not even approach neutral. No treatment may be necessary. However, McKeever and Wilson believe that if this type of dislocation produces pain, fusion is the operation of choice. It may be that one of the simpler operations, as mentioned, should precede the more extensive fusion operation. (Dorgan, J. A., Posterior Dislocation of the Shoulder: Am. J. Surg. 89: 890-899, April 1955)

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Ureteral Obstruction from Endometriosis

It would appear that primary involvement of the ureters by endometriosis is an exceedingly rare phenomenon. Only 5 cases are recorded in the medical literature in which a single ureter has been obstructed by an endometrial implant without bladder involvement. Of these cases, 2 showed

actual invasion of the ureteral wall with projection into the lumen of the ureter (primary endometriosis). The other 3 cases demonstrated ureteral obstruction secondary to compression from an extraureteral implant (secondary endometriosis). Generalized pelvic endometriosis was demonstrable in all of the 3 latter cases.

In the German literature, in 1943, Navratil discussed a case of unilateral ureteral obstruction that is included in this series of 5. He also mentioned 8 other cases of ureteral obstruction from endometriosis, in the European literature and personal communications; none of these are discussed in this article.

To these 5, the authors add 3 more cases of unilateral ureteral obstruction secondary to compression from pelvic endometriosis without bladder involvement.

One outstanding characteristic of this entity is its chronicity. Aside from O'Connor's and Greenhill's case, pain over the involved kidney had been present for over a year, and in most cases for 2 years or more. This pain was the chief complaint in all but one of the 8 cases. In the authors' 3 cases and in Navratil's case there was a definite relationship of pain, either renal or pelvic, to the menses. Just preceding or during menses seemed the period of greatest distress. As would be expected, those cases without actual intraureteral invasion of the endometriosis showed no cyclical hematuria. In both cases with invasion of the ureteral lumen, gross hematuria was demonstrated. In none of these cases was there concurrent bladder endometriosis.

The positive diagnosis of endometriosis as a cause of ureteral obstruction is exceedingly difficult to make. Positive evidence of this fact is revealed in that in only one of the reported cases in the literature has the etiologic factor of endometriosis been the working diagnosis. In fact, in few of the cases, is it even considered. It is most commonly confused with ureteral tumor, pelvic kidney, non-opaque calculus, and inflammatory stricture of the ureter. However, several factors may aid in the differential diagnosis: (1) Pyelographically, the obstruction is always seen in the lower one-third of the ureter. Although renal endometriosis has been reported, no obstructing ureteral lesion of the upper two-thirds has ever been reported. (2) Concurrent pelvic endometriosis is almost always present. (3) Although not always present, there frequently is cyclical pain either in the renal or pelvic areas. (4) Hematuria may be present, but is all too frequently absent.

Age relationship seems of little help so long as the patient is between menarche and menopause. There seems to be no predilection for either ureter.

The treatment of endometriosis anywhere can be summarized in two categories: (1) local excision of the endometrial transplant; (2) castration by surgical, x-ray, or hormonal means. The first method of treatment

is usually reserved for the young patient with a small lesion in the hope of retaining fertility; the second method certainly seems the treatment of choice in patients with ureteral involvement, especially when there is a chance of salvaging the kidney. It would seem that surgical castration is the most complete and positive method. However, Navratil used x-ray castration plus testosterone in his case with an excellent result. (Ratliff, R. K., and Crenshaw, W. B., Ureteral Obstruction from Endometriosis: Surg. Gynec. & Obst.: 100: 414-416, April 1955)

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Vesical Neck Contracture

Contracture at the bladder outlet often comprises a vexing problem of treatment because the condition tends to recur. There are many conditions that fall under the general heading of bladder neck contracture, and when the cause is spasticity or hyperplasia of the internal vesical sphincter, the results of any form of surgery are usually excellent. But when cicatrization is the basis of contraction, there is often deep-seated tissue involvement of the entire bladder neck which not only causes a diminution of the urethral caliber but also a shortening of the urethra; often the ureters are drawn down into the bladder outlet.

The patient complains of typical obstructive symptoms, or, in some instances, his complaint is related more to long-standing infection. Endoscopic examination reveals the presence of a contracted bladder outlet or just an elevation of the posterior vesical lip in the form of a fibrous bar. In recent years, all urologists have agreed that this condition is best treated by endoscopic resection. However, many experienced resectionists have held the view that most of their bad results have occurred in this group of patients. The recurrence rate is high, and endoscopic examination of the recurrent case reveals a new contraction ring or bar of tissue, and, in extreme cases, there may be only a filiform-size orifice at the bladder outlet. The constrictive tendency of the tissues is so great that further treatment by enlarging the channel from within is followed by prompt contraction and recurrent obstruction.

Dr. Bradford Young of San Francisco described a new technique for the treatment of bladder neck obstructions in children which appeared to be particularly applicable to the problem under consideration. His operation applies the Heineke-Mikulicz principle for enlarging the bladder outlet. He uses a short midline incision in the bladder just above its junction with the urethra, then extends the incision down into the prostatic urethra in male patients; in the female it is extended for a short distance into the urethra. Through this opening, the surgeon is able to look for valves in

the urethra and excise them, or he can excise a wedge of posterior vesical lip if there is a need for it. Following this, both posterior and anterior incisions are closed by a transverse suture line to widen the vesicle orifice.

This present report is concerned with the application of the operation to the treatment of bladder neck contracture in adults where its success may well depend on a principle which is entirely different from the original concept that was enunciated by Dr. Young. In contracture, the entire outlet of the bladder is involved in a dense scar. When the prostatic urethra is laid open anteriorly by a longitudinal incision, the ring of scar can easily be spread open by lateral retraction. The surgeon can determine, by vision as well as palpation, whether there is an elevated bar on the floor which needs excision. If present, it can be removed by wedge incision and the defect closed with one or two interrupted sutures. But there may be no bar to excise at the posterior vesical lip. In either event it would appear that an essential principle is involved in the transverse closure of the anterior incision which incorporated a keystone of normal bladder muscle into the spread ring of scar. This should prevent further contracture.

A variant of this technique was recently reported in a personal communication by Mr. Noel Bonnin of Adelaide, South Australia. He uses a Y-shaped incision with the long arm opening the prostatic urethra. The apex of the triangular bladder flap then slides down into the widened urethral opening forming a V closure.

The authors used Dr. Bradford Young's technique in treating 14 adults, 9 of whom had recurrent obstructions following previous operations. The result was excellent in 9 cases, while 4 were significantly improved yet could not be considered cured. The authors' observations, thus far, have led them to be enthusiastic about the procedure; they commend it to others in the treatment of recurrent vesical neck contracture. It is hoped that the long-term results will be as good as they now promise to be. (Nesbit, R. M., and Crenshaw, W. B., Treatment of Bladder Neck Contracture by Plastic Operation: J. Urol., 73: 516-519, March 1955)

* * * * *

Criticism of Renal Angiography

Renal arteriography is now an accepted urologic diagnostic aid. Since its introduction by dos Santos, enthusiasts of the technique have performed thousands of arteriograms and have described their value in the differential diagnosis of renal parenchymal and vascular abnormalities.

At the University of Michigan, renal arteriography has been employed in the investigation of 200 patients. The series represents a selected group chosen as candidates for this procedure primarily by reason of the fact that

accepted methods of investigation had not given sufficient definitive information to guide further therapy, and it seemed reasonable to expect that arteriography might provide this needed additional knowledge. It is with this group that an attempt has been made to examine objectively the value of aortography and to appraise, as candidly as possible, each case primarily to determine in what way this diagnostic procedure affected the method of clinical management. At present, it appears that renal angiography allows the physician the privilege of presumptive conclusions when confronted with the differential diagnosis of renal or retroperitoneal lesions. Certainly, interesting information about the vascularity of the abdominal and retroperitoneal viscera is always obtained from angiography. This does not necessarily justify its frequent use nor allow it to be considered as a universally meritorious procedure.

It seems that a consideration of the value of the aortogram resolves itself into one of purpose. If the principal aim is an academic one, and is primarily concerned with the exploration of every possible facet before submission of the patient to surgical intervention, then the aortogram truly fulfills a need. If, however, concern lies more with practical clinical management and measures merit in the terms of clinical application, then the information gained by arteriography may be less helpful. To narrow this further, it may be best to question the criteria for performance of arteriography and answer by saying that, to be useful, the method should provide information unobtainable by the usual retrograde or excretory roentgenographic techniques; information which might clinically alter or improve the management of the individual patient.

To permit evaluation with these criteria in mind, individual cases have been selected from the group as a whole because they represent diagnostic problems of such nature that it would seem rational to expect that renal angiography would supply information of value.

The limitations of aortography, when applied clinically, are illustrated in this presentation. Selected patients with known pathology were subjected to arteriography in attempts to obtain significant information which would aid in the decisions regarding their treatment. The aortogram failed to furnish information which altered the normal course of events with few exceptions.

The differentiation of renal tumor from renal cyst is almost always demonstrated with accuracy by arteriography. Nevertheless, it is usually the accepted policy to expose such lesions surgically, and, under such circumstances, the aortogram becomes a redundant procedure.

Arteriography for adrenal disease has been disappointing. It must be realized that the limitations on adequate interpretation and technique of performance are many. Ideally, one would prefer to visualize only the renal or adrenal circulation and avoid filling the other branches of the

abdominal aorta. This is practically impossible with the translumbar route. It may be that percutaneous femoral artery catheterization, with a polyethylene catheter to the renal artery level, will provide a method for greater accuracy of interpretation and diagnosis.

In the experience of the author, renal angiography has been practically of no benefit in the investigation of patients with renal hypertension. The axiom, that a kidney is only as good as its blood supply, is a valid one. However, an accurate appraisal of the blood supply may often prove to be very difficult. Simple introduction of the needle near the renal artery for aortography, and injection of contrast material are known to produce arterial spasm and could conceivably be quite misleading in the interpretation of the aortogram when applied to a study for unilateral renal ischemia. Certainly, the visual demonstration on roentgenography of the larger vessels of the vascular bed is at best a gross and inaccurate estimate of total blood supply to an organ. Renal physiologists accurately measure renal blood supply in terms of renal function. Clinicians can do likewise by measuring renal function in terms of glomerular filtration rate with creatinine or urea clearance tests. In this clinic the "split-creatinine" clearance test for estimating individual kidney function has proved infinitely more valuable than renal angiography in studying patients with hypertension of renal origin.

The arteriogram would seem to be valuable for the patient with polycystic disease where surgical intervention for diagnosis is imminent. It would appear also to be an aid in dealing with intrinsic structural anomalies of the renal vessels as encountered in renal fusion, fused ectopia, and aneurysm. The adept surgeon, however, will continue to rely on his skill in dissection at the operating table in dealing with these difficult problems.

From the author's experience, it would appear that only in isolated, carefully selected instances, is one justified in utilizing renal angiography, as it is often an unnecessary and frequently a redundant procedure. Certainly, its indiscriminate use is to be deplored. (Nesbit, T. E., A Criticism of Renal Angiography: Roentgenology, 73: 574-582, April 1955)

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Dental Program of the Office of Naval Research

Dental problems have been one of the major concerns to the Navy in its efforts to maintain proper health standards among its personnel. Dental research by and for the Navy experienced a tremendous stimulus when the Office of Naval Research was authorized by the 79th Congress, on August 1, 1946, by Public Law 588. This law specified that this Office shall be charged with such duties as the encouragement, promotion, planning, initiation, and coordination of Naval research. One important phase is sponsorship

of a broad program of basic research in selected scientific fields which have important bearing on Navy problems.

Since the establishment of the Office of Naval Research a dental program has been supported in universities and other nonprofit institutions and has steadily increased in size from one project in 1946 to 25 projects during the current year. During the past four years, total support of studies has averaged \$180,000 per year. Support is given to problems having the greatest Naval applicability. In unclassified projects, investigators are free to communicate their ideas to their colleagues, and to publish their results in recognized scientific journals. In addition to the basic program, an applied research program is supported.

Any dentist or scientist may submit a proposal for consideration. The proposal should contain the following information:

- a General statement of the objective.
- b Brief review of the scientific background of the proposed investigation.
- c A reasonably complete technical description of the proposed work.
- d Description of general and special facilities available for performing the contemplated task.
- e Name and background of principal investigator and professional associates.
- f Bibliography of pertinent publications.
- g Estimated duration of the project and an annual budgetary breakdown, including salaries of professional investigators, graduate or undergraduate students, and technicians; capital equipment and its cost; expendable equipment and its cost; other expenses to include travel and clerical assistance; overhead; and the extent of participation by the institution.
- h List of other research projects, governmental and otherwise, currently being undertaken by the principal investigator.
- i Information as to any other agencies to whom the proposal is being submitted for possible financial support or assistance.

When a dental proposal is received, it is reviewed and then referred to the National Research Council for review and evaluation. The Council is composed of many civilian scientists who are assigned to various committees and subcommittees covering many fields of science. One of these is the Committee on Dentistry and its four subcommittees. These groups review all of the unclassified dental proposals submitted to the Office of Naval Research. In some instances, a proposal may be referred to other committees of the Council for comments, particularly if the proposal covers several disciplines of science. In due time, the National Research Council forwards its comments and recommendations to the Office of Naval Research. Proposals which are disapproved by this advisory group normally do not receive support, although exceptions have been made. The proposal is also sent to the Bureau of Medicine and Surgery for review. This is necessary because some of the proposals involve participation of Naval personnel or the joint participation with a Naval laboratory in a field of mutual interest.

After the recommendations have been received, the final selection of the proposal is based on its bearing on military problems, its scientific merit, competence of the investigator, and the availability of funds. When a proposal has been scientifically approved, a mutually agreeable contract between the investigator's institution and the Navy Department is negotiated.

During the past year, a dental officer has been assigned to the Office of Naval Research, London Branch. This assignment calls for visits to laboratories in the United Kingdom and Western Europe with the intention of exchanging information of mutual interest. Technical reports of the work in progress are prepared and this information is given a wide distribution to government agencies and to civilian institutions. The deans of all dental schools receive these reports. This liaison service has been well received and further expansion in developing this service is being considered.

The efforts put forth in this program are well coordinated with those of the Army and Air Force through the Department of Defense. In addition, liaison is maintained with other government agencies who are also engaged in supporting and conducting studies and investigations, such as the National Institute of Dental Research, National Bureau of Standards, Veterans Administration, and the National Science Foundation.

Also, effective exchange of information is maintained with institutions and organizations conducting studies which may be supported by funds from private sources, endowments, foundations, or commercial sources.

In addition, the Bureau of Medicine and Surgery supports and encourages dental research at Navy installations. Pertinent information may be obtained from the Manual of the Medical Department, Chapter I.

(CDR W. E. Ludwick DC USN)

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"Commendations"

On March 16, 1955, the Governor of Rhode Island approved a resolution of the General Assembly commending the commanding officer of the Naval Hospital, Newport, Rhode Island, Captain J. L. Enyart, MC USN, and the personnel at the Naval Hospital, Newport, "for precision action in coordinating the rescue work when an explosion at sea upon the USS Bennington proved that efficient organization is essential to life saving. "

The commendation read, in part: "The personnel of the Hospital, as the result of tight and efficient organization plans, executed with precision action, coordinated rescue work with the Naval Base commands and with civilian organizations . . . The rapid and thorough manner in which this Hospital handled the Bennington's disaster victims was an obvious demonstration of administrative excellence . . . The Hospital is one of the finest anywhere and its public relations with communities and personalities are of real value to the Naval Service" (TIO, BuMed)

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On March 10-11, 1955, an adhoc panel of the Division of Medical Sciences, National Research Council, under the Committee on Dentistry, discussed the question of further research on the biological magnetostrictive cutting devices currently under investigation by staff members of the Naval Medical School, National Naval Medical Center, Bethesda, Md.

A report outlining the types of studies which appear to be required for evaluation of the safety of these devices will probably be presented to the Committee on Dentistry at the next meeting.

Following the discussion, the panel with the Committee's endorsement, has transmitted the following resolution:

"That the Navy be commended for the work that it has done in the field of magnetostrictive cutting devices, and be encouraged to continue and expand this program. "

* * * * *

"A Ray of Sunshine"

"I have just been accepted as an officer in the Naval Reserve Medical Corps. I want to communicate to you my feeling of pride in having been given this opportunity to serve my country and I want also to assure you that I will discharge my responsibilities to the very best of my ability.

It is my earnest hope that I will be given the opportunity to practice the specialty in which I am presently engaged - Psychiatry. Also, should it be a possibility to consider, I would appreciate being stationed in a hospital, and if possible on the West Coast. I have no objection to Overseas Duty, failing an assignment on the West Coast. "

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From the Note Book

1 Dedication ceremonies for the Armed Forces Institute of Pathology, Walter Reed Army Medical Center, Washington, will be held on 26-27 May 1955. The dedicatory address will be given by the President of the United States on Thursday, May 26 at 1:30 p. m. (A. F. I. P.)

2 Captain W. M. Silliphant, MC USN, Deputy Director, Armed Forces Institute of Pathology, discussed the "Pathology of War Wounds" before the surgical staff and third year medical students of Baylor University, Houston, Texas, on April 6, 1955.

While in Houston, Captain Silliphant attended the annual meetings of the American Association of Pathologists and Bacteriologists and the International Association of Medical Museums. (TIO, A. F. I. P.)

3 Captain W. N. Van Zile, DC USN, Chief of Dental Service, U. S. Naval Hospital, Oakland, Calif., presented a lecture on "A New Technique in Root Canal Therapy for Anterior Teeth" to the San Francisco Medico-Dental Study Club and Naval Reserve Dental Companies #12-1 and #12-2, San Francisco, Calif., on March 23, 1955. (TIO, BuMed)

4 Dental officers presented the papers listed below at the meeting of the International Association for Dental Research, March 18, 19, and 20, 1955, in Chicago.

LT W. J. Carter, DC USN

"Salivary phosphatases, caries activity, and human oral streptococci and lactobacillus"

LT H. R. Englander, DC USNR

"The Catalase content of blood from normal individuals and those suffering from periodontal disease"

CDR L. S. Hansen, DC USN,
CDR A. G. Neilsen, DC USN

"A study of the biologic effect of an ultrasonic dental cutting instrument"

LT K. C. Hoerman, DC USN	"Variations in salivary phosphatase activity"
CDR F. L. Losee, DC USN	"Dental caries and rate of growth in three strains of white rats"
LTJG S. C. Peckham, MSC USN	"Ethylenediamine vs. KOH-glycol in the removal of the organic matter of dentin"
LT J. H. Manhold, DC USN, LTJG M. B. Jones, MSC USNR	"Social attitudes in relation to caries formation"
LCDR N. W. Rupp, DC USN	"A method for measuring the mucosal surface contour of impressions, casts, and dentures"

5 Six pharmaceutical concerns have been licensed to manufacture and distribute in interstate commerce the poliomyelitis vaccine developed by Dr. Jonas Salk of the University of Pittsburgh.

Licenses were issued to the following requesting firms:

Cutter Laboratories, Berkeley, Calif.	Pittman-Moore Co., Zionville, Ind.
Eli Lilly Co., Indianapolis, Ind.	Sharpe and Dohme, Philadelphia, Pa.
Parke-Davis & Co., Detroit, Mich.	Wyeth Laboratories, Inc., Marietta, Pa.

6 Premature infants should be given only that amount of supplemental oxygen compatible with normal respiration and survival, preferably under 40%, and for the briefest possible time. They should be gradually weaned from high oxygen concentrations to normal oxygen tension in air. (AF Med. J., April 1955; CDR G. L. Tabor, MC USN, CDR J. F. Shaul, MC USN, and LT O. M. Graves, MC USN.)

7 Preoperative radiation in selected cases of single and multiple papillary tumor will reduce the size of the tumor sufficiently to make transurethral treatment the method of choice in a larger number of cases. (J. Urol., March 1955; D. R. Higbee)

8 Hyaline bodies (Drusen) are small spheric masses, occurring either on the surface of the optic nerve, in its substance, or in the adjacent retina. Their origin is uncertain but considered to be congenital. They usually occur as bilateral lesions and may remain dormant or may coalesce, calcify, and become associated with visual fixed defects. (Am. J. Ophth., March 1955; LCDR S. D. McPherson, Jr., MC USNR)

- 9 The clinical, hematological, and pathological features of histiocytic leukemia and monocytic leukemia are described in Cancer, March-April 1955; H. W. Belding, M.D., G. A. Daland, B.S., F. Parker, Jr., M.D.
- 10 An excellent article entitled "National Defense Against Atomic Attack" is recommended for "All Hands Reading." This article appears in Scientific Monthly, April 1955. MajGen. W. E. Todd, U.S.A.F., LtGen. W.S. Paul, USA, and the Hon. Val Peterson, F.C.D.A.
- 11 An analysis of the causes of death in 17 operating room deaths is presented in Surg. Gynec. & Obst., April 1955; K. M. Lewis, M. D., and E. G. Stanley-Brown, M.D.
- 12 The hazard of transfusion in patients with chronic anemia is reviewed in Am. J. Surg., April 1955; J. Mithoefer, M.D.
- 13 Nisentil, a synthetic piperidine derivative, in 30 to 60 mg. doses, compares favorably with meperidine as an analgesic. Its lack of euphoric effect and mental dullness makes an improvement over previously used analgesic agents, particularly with respect to addiction. (Surgery, March 1955; E. H. Bachrach, A.N. Godholm, M.D., and A.M. Betcher, M.D.)
- 14 The findings obtained by study of splenic aspirations are presented. Diagnostically, they were most helpful in myeloid metaplasia, lymphoma, kala azar, and Gaucher's Disease. (Blood, March 1955; R. J. Watson, H. D. Shapiro, R. E. Ellison, and H. C. Lichtman.)
- 15 A simplified method of cytologic examination, employing wet, fresh films, prepared and studied as such from bronchial swabbings, is described in J. Thoracic Surg., March 1955; L. J. McCormack, M.D. et al.
- 16 A report describes clinical and laboratory observations in 7 patients in whom acute pulmonary infection was found to be responsible for the development of congestive heart failure. (Am. Heart J., March 1955; K. Braun, M.D. and G. Izak, M.D.)
- 17 In certain acute disorders of the eye which have been reported to respond irregularly, incompletely, or transiently to hormonal therapy, and, in certain inflammatory and degenerative disorders of the eye, reported not to show even an incomplete response to such treatment, intensive individualized long-term corticotropin therapy has permitted a majority of patients to regain normal, or useful, vision, and in almost all cases, to maintain their full improvement indefinitely. (Arch. Int. Med., March 1955; Maj. W. Q. Wolfson, MC USA, J. R. Quinn, M. D., and W. F. Spearman, M.D.)

Medical Department Personnel on Temporary
Additional Duty in Washington, D. C.

Frequently, Medical Department personnel appear in the Bureau of Medicine and Surgery requesting endorsement on temporary additional duty orders, stating that they had arrived in the area several days previously but had not reported; or that their orders did not require them to report but that an endorsement was required for the purpose of claiming per diem allowance. On several occasions, orders have been mailed to the Bureau requesting endorsement as referred to above even though the individuals concerned had not reported or made their presence officially known.

The above practices have, on occasion, resulted in embarrassment to the individuals concerned and are obviously irregular procedures. All Medical Department personnel are advised that there is a 24-hour-a-day, seven days a week, military watch in the Bureau and that individuals arriving in Washington, D. C., who require endorsement on their orders by the Bureau should report to the Staff Military Personnel Officer during regular working hours or to the Military Watch Officer after regular working hours as soon as practicable after their arrival. (PersDiv, BuMed)

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Invitational Lectures Presented
by Medical Officers

In response to the interest of leading medical centers in Europe in the Tissue Bank at the National Naval Medical Center, the Surgeon General of the Navy has delegated LCDR G. W. Hyatt, MC USN, Consultant on tissue bank matters to the Bureau of Medicine and Surgery, and LT R. G. Kindred, MC USNR, Officer in Charge of the Tissue Bank, to represent the Navy Medical Department at a series of invitational lectures. These presentations include motion pictures, transparencies, and a companion lecture of the tissue bank methods of procurement and preservation. While the clinical application of homografts will be presented in general, particular emphasis will be placed on the orthopedic aspect of bone and fascial grafts.

Drs. Hyatt and Kindred left on March 29, 1955. Their schedule included presentations at London University, the Royal Institute of Orthopedics, and St. Thomas' Hospital in London; Wingfield Morris Hospital, Oxford; the Faculty of Physicians and Surgeons, Glasgow; Royal College of Surgeons, Edinburgh; Hospital Cochin, Paris; and the Royal Wilhelmina Institute, Amsterdam. (NavMedSch., NNMC, Bethesda, Md.)

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Points Approved for Reserve Dental Officers
Attending San Francisco Meeting

Bureau of Naval Personnel Notice 1301, of 28 January 1955, approves as training duty the attendance of Reserve Dental Officers at a Dental-Military Seminar to be held at Treasure Island, San Francisco.

This three-day Seminar will be held in conjunction with the American Dental Association meeting in San Francisco, 17-19 October 1955, and takes advantage of the concentration of Reservists at the national meeting.

Certain provisions must be met by those in attendance in order to qualify for retirement points. The Reservist must have equivalent duty orders. He must attend the Dental-Military Seminar for two hours of instruction for each point. The Seminar will be held in conjunction with the American Dental Association meeting but will be separate from that meeting. It will be under control of the District Dental Officer, Twelfth Naval District, who will report attendance to the Chief, Bureau of Medicine and Surgery. A maximum of three retirement points may be earned by attending the Seminar. (DentDiv, BuMed)

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Course in Electroencephalography

Requests are invited for attendance at a three-months course of instruction in Electroencephalography, from Regular Navy medical officers currently assigned duty in Neuropsychiatry. The course will be presented at the U.S. Naval Medical School, National Naval Medical Center, Bethesda, Maryland, in late summer or early fall 1955. It will consist of instruction in basic electricity, neurophysiology, and clinical techniques and application, and is designed to promote further knowledge and better interpretation in electroencephalography.

Interested and eligible medical officers should forward requests for attendance to the Chief of the Bureau of Medicine and Surgery via official channels. Reliefs during attendance cannot be provided. If approved, assignment to the course will be made in a duty under instruction status in accordance with BuSandA Notice 7200 of 31 March 1955. (ProfDiv, BuMed)

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The printing of this publication has been approved by the Director of the Bureau of the Budget, June 23, 1952.

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Board Certifications - Inactive Duty OfficersAmerican Board of Anesthesiology

LT Lloyd D. Bridenbaugh, Jr. (MC) USNR

American Board of Dermatology

LTJG Jesse B. Shelmire (MC) USNR

American Board of Dermatology and Syphilology

LT Warren S. Carter (MC) USNR

LT Donald P. Cole, Jr. (MC) USNR

LCDR Elmer H. Tuttle (MC) USNR

American Board of Internal Medicine

LT Thomas J. Anderson (MC) USNR

LTJG James F. Biggart, Jr. (MC) USNR

LT Willard H. Boggan, Jr. (MC) USNR

LT Lawrence G. Bole (MC) USNR

LT Cyril Y. Bowers (MC) USNR

LCDR John H. Burbank (MC) USNR

LCDR Ray L. Casterline (MC) USNR

LT Joseph B. Cobb (MC) USNR

LTJG Arthur F. Elliott (MC) USNR

LTJG Ralph V. Ford (MC) USNR

LT Belton G. Griffin (MC) USNR

LT Hurst B. Hatch, Jr. (MC) USNR

LCDR Oscar LaBorde (MC) USNR

LT Harold H. MacGilpin, Jr. (MC) USNR

LCDR Philip F. Mark (MC) USNR

LTJG Earle D. Mason (MC) USNR

LTJG Mims Mitchell, Jr. (MC) USNR

LCDR John E. Neumann (MC) USNR

LTJG Edward J. Nightingale (MC) USNR

LTJG Stafford L. Norman (MC) USNR

LTJG Elmer M. Purcell, Jr. (MC) USNR

LTJG Thomas J. Reeves (MC) USNR

LTJG Harry M. Shytles, Jr. (MC) USNR

LTJG Robert B. Simons, Jr. (MC) USNR

LTJG Harry F. Singleton (MC) USNR

LTJG James M. Skelton (MC) USNR

LCDR William P. Smith (MC) USNR

LT Robert A. Stier (MC) USNR

LT Archie C. Thompson (MC) USNR

LT Walter S. Thompson (MC) USNR

CDR George W. Winkelman (MC) USNR

American Board of Neurological Surgery

LTJG Arthur Arnold (MC) USNR
LT Lycurgus M. Davey (MC) USNR
LTJG Nicholas C. Wetzel, Jr. (MC) USNR

American Board of Neuropsychiatry

CDR David R. Talbot (MC) USNR

American Board of Obstetrics and Gynecology

LT Edward J. Flynn (MC) USNR
LT Frank S. Oser, Jr. (MC) USNR
LTJG Edward Schneider (MC) USNR
LT Samuel G. F. Waddill (MC) USNR

American Board of Ophthalmology

LTJG James E. Bresette (MC) USNR
LT Brian J. Curtin (MC) USNR
LT John K. Erbaugh (MC) USNR
LT Robert A. Moses (MC) USNR
LT Levon D. Wright (MC) USNR

American Board of Orthopedic Surgery

LCDR Faheam Cannon (MC) USNR
LCDR Victor P. Conforti (MC) USNR
LT Harry W. Stuermer (MC) USNR
LTJG Souther F. Tompkins (MC) USNR

American Board of Otolaryngology

LTJG Wesley H. Bradley (MC) USNR
LTJG Charles D. Cyphers (MC) USNR
LTJG James M. Keirnan (MC) USNR
LTJG John M. Lore (MC) USNR
LT Will P. Pirkey (MC) USNR

American Board of Pathology

LT David J. Carlson (MC) USNR
LT Richard B. Jamieson (MC) USNR
LT John A. Newman (MC) USNR

American Board of Radiology

LT Frank J. Anderson, Jr. (MC) USNR

(Note: This list of Board Certifications will be concluded in the May 27 issue of the News Letter.)

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Recent Research ProjectsNaval Medical Research Institute, NNMC, Bethesda, Md.

- 1 Theory of Protein Solutions. NM 000 018.06.37, 26 October 1954.
- 2 Plastic Venous Prostheses - Memorandum Report 54-11, related to NM 007 081.19, 1 November 1954.
- 3 The Comparative Effect of Platelets on Prothrombin Utilization from Dogs in the Degenerative and Regenerative Phase of Irradiation Bone Marrow Aplasia. NM 006 012.04.76, 11 November 1954.
- 4 Statistical Methods for Determining Requirements of Dental Materials. Memorandum Report 54-12. NM 000 018.07, 23 November 1954.
- 5 An Approximation of Human Caries Distribution in Osborne-Mendel Rats on Heated Skim Milk Powder Diet. NM 008 012.01.12, 7 Dec., 1954.
- 6 Anaerobic Bacteria in Carious Dentin. NM 008 012.04.04, 16 Dec., 1954.
- 7 The Distribution and Growth of Ice Crystals in Frozen Mammalian Tissue. NM 000 018.01.08, 3 January 1955.

Naval Medical Research Unit No. 3, Cairo, Egypt

- 1 Annual Report for 1954, Department of Virology.
- 2 Chiropteran-Parasitizing Argas Ticks (Ixodoidea, Argasidae), 1. The Subgenus Chiropterargas. NM 005 050.29.21.
- 3 Helminth Parasites of Reptiles, Birds, and Mammals in Egypt. 1. Strep-topharagus Kunzti Sp. Nov., from Rodents with a Review of the Genus. NM 005 050.43.01.
- 4 Ixodes Redikorzevi Redikorzevi Olenov, 1927 (Ixodoidea, Ixodidae) in Egypt. NM 005 050.29.22.
- 5 Liver Biopsy in Clinical Schistosomiasis, Comparison of Wedge and Needle Types. NM 007 082.25.01.
- 6 The Value of Routine Rectal Biopsy in the Diagnosis of Schistosomiasis. NM 007 082.09.06.

Naval Air Development Center, Johnsville, Pa.

- 1 The Effects of Tonic Electrical Stimulation as a Means of Combating Adverse Circulatory Disturbances Caused by Acceleration. NM 001 060.12.02, 25 January 1955.
- 2 Acceleration and Human Performance: A Survey of Research. NM 001 111.300.1, 22 March 1955.
- 3 Summary Review of Heat Loss and Heat Production in Physiologic Temperature Regulation. NM 001 090.04.02, 14 October 1954.

Naval Medical Field Research Laboratory, Camp Lejeune, N.C.

- 1 The Highway Situation Test. (Experimental Form A) NM 005 052. 33.03, January 1955.
- 2 The Effect of Morphine on Hepatic Blood Flow in the Normal Anesthetized Dog. NM 006 014.08.03, February 1955.
- 3 An Experimental Field Evaluation of Negative Lenses for Correction of Night Myopia. NM 007 083.03, February 1955.
- 4 A Psychological Comparison of Accident-Violation Free and Accident-Incurring Automobile Drivers. NM 005 052.33.04, February 1955.
- 5 The Rosenzweig Picture Frustration Study as an Instrument for Selecting the Accident-Free and Violation-Free Automobile Driver. NM 005 052.33.05, February 1955.

Medical Research Laboratory, Submarine Base, New London, Conn.

- 1 Predicting Success in Submarine School. NM 003 041.53.02; Report No. 260, 2 November 1954.
- 2 Studies of Lung Volumes in Instructors at the Escape Training Tank. NM 002 015.02.01, 26 November 1954.

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BUMED NOTICE 6710

5 April 1955

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations Having Medical/Dental Personnel
Regularly Assigned

Subj: Antibiotics; extension of potency dates

Ref: (a) Medical and Dental Materiel Bulletin (MDMB) Edition
No. 52 of 1 March 1955

This Notice provides authority to extend the potency dates of certain antibiotics.

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BUMED INSTRUCTION 6100.1B

8 April 1955

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having a Flight Surgeon or Aviation Medical Examiner

Subj: Physical qualification certification by the Civil Aeronautics Administration of Naval and Marine Corps personnel

Ref: (a) Article 15-69 (12), ManMedDept

This Instruction is promulgated for guidance of flight surgeons and aviation medical examiners with respect to physical examinations and physical qualifications of candidates for Civil Aeronautics Administration Second Class Airman's Medical Certificates, the processing of the Report of Medical Examination, Standard Form 88, and the issuance of the aforementioned certificate.

BuMed Instruction 6100.1A of 27 July 1954 is canceled.

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BUMED INSTRUCTION 6820.4B

11 April 1955

From: Chief, Bureau of Medicine and Surgery
To: Ships and Stations Having Medical/Dental Personnel Regularly Assigned

Subj: Medical and dental professional and technical books; procurement of

Ref: (a) OpNavInst 7100.2 of 6 June 1951 (Notal)

This Instruction informs addressees of the procedure to be followed in the procurement of professional and technical medical and dental books. BuMed Instruction 6820.4A is canceled.

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BUMED NOTICE 7302

15 April 1955

From: Chief, Bureau of Medicine and Surgery
To: Distribution List

Subj: Financing of "in-store material" in medical and dental activities
through the Navy Stock Fund

This Notice acquaints addressees with plans which are now being developed to extend Navy Stock Fund methods of the financing of inventories of "in-store materials" to naval hospitals and medical and dental facilities at industrial fund activities.

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BUMED INSTRUCTION 6120. 3B

18 April 1955

From: Chief, Bureau of Medicine and Surgery
Chief of Naval Personnel
To: Distribution List
Subj: U. S. Naval Academy; Formal physical examinations of candidates
for Midshipmen
Ref: (a) Art. 15-43, ManMedDept
(b) Art. 15-43(5) (b) (2), ManMedDept
(c) Art. 15-43(5) (a) (5), ManMedDept

This Instruction establishes procedures and reporting methods for processing the final physical examinations of civilian candidates for admission to the U. S. Naval Academy.

BuMed Instruction 6120. 3A of 22 June 1953 is cancelled.

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BUMED INSTRUCTION 6710. 14

21 April 1955

From: Chief, Bureau of Medicine and Surgery
To: All Ships and Stations
Subj: Defective medical and dental material; authority for disposition of
Ref: (a) Medical and Dental Materiel Bulletin, Edition No. 53,
dated 1 April 1955
(b) Art. 25-21, ManMedDept

This Instruction provides authority for the disposal of defective material listed in paragraph IV of reference (a).

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BUMED NOTICE 7100

18 March 1955

From: Chief, Bureau of Medicine and Surgery
To: All Navy and Marine Corps activities (other than BuMed managed activities) having a BuMed ambulance allowance
Subj: Fiscal Year 1957 requirements for ambulances

Ref: (a) Appendix A, BuDocks Technical Publication NavDocks TP-Tr-1
of 15 June 1953

Encl: (1) Sample Format

This Notice desires information concerning ambulance replacement and augmentation requirements from field activities for use in planning and preparation of the Bureau of Medicine and Surgery FY 1957 budget estimates, and to request detailed justification in support of present allowances. This data is necessary to assist this Bureau in support of its position during budgetary hearings.

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PREVENTIVE MEDICINE SECTION

Training and Visual Aids

Postgraduate Training in Preventive Medicine

Medical officers of the Regular Navy, Lieutenant Commander or below, who have had sea or foreign duty and who desire to specialize in preventive medicine, are invited to make immediate application for one academic year of postgraduate training beginning in August, September, or early October 1955. The choice of the school can be made for this training, which may be taken at any one of the accredited Schools of Public Health in the United States or Canada which give a course leading to the degree,

Master of Public Health. Applications should be forwarded as soon as possible to the Chief of the Bureau of Medicine and Surgery, via the commanding officer, making reference to this article, and should be accompanied by an appropriate obligated service agreement.

There is a need for medical officers trained in epidemiology, which is the basic discipline of preventive medicine. Several of the schools of public health afford the opportunity for the study of industrial health leading to the degree, Master of Industrial Health.

The following civilian schools offer an accredited course leading to the degree, Master of Public Health (M. P. H.), and were listed as accredited institutions by the American Public Health Association in the American Journal of Public Health, September 1954:

California, University of
School of Public Health
Berkeley 4, California
C. E. Smith, M. D., Dean

Columbia University
School of Public Health
New York 32, New York
H. W. Brown, M. D., Director

Harvard University
School of Public Health
Boston 15, Massachusetts
John C. Snyder, M. D., Dean

Johns Hopkins University
School of Hygiene and Public Health
Baltimore 5, Maryland
E. L. Stebbins, M. D., Director

Michigan, University of
School of Public Health
Ann Arbor, Michigan
H. F. Vaughan, Dr. P. H., Dean

Minnesota, University of
School of Public Health
Minneapolis 14, Minnesota
G. W. Anderson, M. D., Director

Montreal, University of
School of Hygiene (Teaching in French)
Montreal, Quebec, Canada
Armand Frappier, M.D., Dean

North Carolina, University of
School of Public Health
Chapel Hill, North Carolina
E. G. McGavran, M.D., Dean

Pittsburgh, University of
Graduate School of Public Health
Pittsburgh 13, Pennsylvania
Thomas Parran, M.D., Dean

Toronto, University of
School of Hygiene
Toronto 5, Ontario, Canada
R. D. Defries, M.D., Director

Tulane University
Department of Tropical Medicine and
Public Health
New Orleans 13, Louisiana
M. E. Lapham, M.D., Dean

Yale University
Department of Public Health
New Haven, Connecticut
Ira V. Hiscock, Sc.D., Chairman

All of these twelve schools are accredited for the Master of Public Health degree (M. P. H. in the United States; the equivalent degree at the University of Montreal and at the University of Toronto is the Diploma of Public Health or D. P. H.).

Among the interesting assignments, available to young medical officers who successfully complete the course, are: preventive medicine units ashore (both in the continental United States and in overseas areas), medical research units, preventive medicine duties at naval training stations, the Bureau of Medicine and Surgery, and various naval schools as instructors in such subjects as epidemiology, environmental health, preventive medicine, and related laboratory sciences. For those who major in industrial health, there are opportunities for assignment as industrial medical officers.

The broad knowledge and experience to be gained in a successful career in epidemiology and occupational medicine in the Navy provide outstanding preparation for the administrative responsibilities to be assumed with advancement in rank through the senior grades. Successful completion of this training meets the academic requirement for the boards in public health.

Attention is invited also to an exceptionally well-conducted course of 11 months offered by the Army Medical Service Graduate School. This course, while emphasizing the military slant, also is excellent in its general coverage of the field of public health. Accreditation for graduates is being sought by the Army. Naval medical officers may apply to the Bureau of Medicine and Surgery for authority to attend.

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Venereal Disease Control

Correction

In the article, "Navy Regulations Concerning Venereal Disease," Vol. 25, No. 7, page 33, paragraph "b" of the bibliography should be changed to: "b. Prophylaxis Measures - BuMedInst 6222.3B"

Also, paragraph "d." page 34, should be changed to: "d. The Treponema Immobilization Test for Syphilis - BuMedInst 6222.5A"

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Insect and Rodent Control

The Housefly as a Carrier of Pathogenic Human Enteric Bacteria in Cairo

It has long been recognized that the common housefly, Musca domestica, plays a role in the transmission of human enteric disease. Rarely, if ever, is the fly the only means of spreading typhoid, paratyphoid, and dysentery organisms; but wherever sanitation practices are poor, enteric disease rates high, and the fly population large, the part played by these insects assumes major importance.

The transmission of infectious organisms by flies is largely mechanical and is a result of their breeding and feeding habits, the fly being attracted to both man's food and his feces. The organisms may be picked up and carried by the body and feet hairs of the insect or ingested and redeposited in the vomitus and feces. Generally, the fly is not affected by the pathogenic organisms it carries internally and externally, and these bacteria

may persist in and on the insect for considerable periods of time. Shigella organisms have been recovered from infected flies for as long as 12 days, typhoid bacilli for 23 days, Salmonella paratyphi A and B for 10 days, and Salmonella enteritidis for as long as 28 days. There is evidence that actual multiplication of pathogenic organisms takes place in the fly intestine.

Fly eggs laid and developed in infected feces have been found to produce infected adults.

The finding of infected flies in nature has been the main circumstantial and epidemiological evidence incriminating Musca domestica in the transmission of typhoid and dysentery. Steinhaus cites 15 reports, and West lists an additional 9, on the isolation of typhoid, paratyphoid and dysentery organisms from trapped flies. As many as 30 to 40% of fly pools captured around human cases, or during epidemics, have yielded strains of Shigella or Salmonella organisms.

The relationship of the Egyptian housefly, Musca domestica vicina, to enteric disease has been recognized since Willcocks, in 1917, stated that this insect played a most important part in the transmission of typhoid fevers and infantile diarrheas. In 1919, Manson-Bahr reported the first isolation of dysentery bacilli from flies caught in nature in Egypt. During the next 25 years, numerous observations were made on the correlation between the incidence of gastro-enteritis and fly densities, the fecal breeding habits of this insect, its contamination of food, and the probability that much of the bacillary dysentery in Egypt was fly-borne.

During more recent years, considerable work has been done concerning the biology and control of the Egyptian housefly, but no literature has been found concerning the bacteriological flora carried by Musca domestica vicina. Hence, the present report, a necessary phase of current epidemiological studies on gastro-enteritis in Egypt, is considered timely.

Flies were trapped in modified versions of the Bishopp trap on 17 occasions between June and September 1952, in 41 areas in and around Cairo.

At the laboratory the live flies were placed in traps in a refrigerator where they were stunned by exposure to a temperature of -12°C for 15 minutes. The catches, ranging in size from a few flies to several thousand, were then sorted into pools of 25 Musca domestica vicina. Four pools, on the average, were cultured from the catch from each trapping area. A total of 156 of these pools were cultured for the presence of human enteric pathogens.

Eighteen of the 156 pools, or 11.5%, were found to be positive for either Shigella or Salmonella organisms. Eighteen strains of 8 species were found. Shigella strains comprised 66% of the isolations and Salmonella the remaining one-third. Shigella flexneri organisms were recovered 7 times; Salmonella typhi on 4 occasions; Shigella dysenteriae 2, Shigella sachs, and Salmonella typhi-murium twice each; and Shigella sonnei once.

Other organisms isolated and identified were: Escherichia coli which was recovered from all but one pool; paracolons, alkaligenes, and proteus organisms, all of which were very commonly found.

An incidence of 11.5% contamination with human enteric pathogens in random trapped fly pools is believed to be of distinct public health significance. In view of the close correlation between gastroenteric diseases and the season of maximum fly density in Egypt, this report lends further evidence to the importance of the fly route in the transmission of these diseases.

The ratio between the Shigella and Salmonella organisms recovered reflects the incidence among human cases of gastro-enteritis caused by these organisms. The isolation of Salmonella typhi-murium from flies is of special interest because this organism is often reported as the causal agent of food poisoning in Egypt.

The consistent presence of coliform and other human intestinal organisms on the flies bears out the observed breeding preference of Musca domestica vicina for human feces. (Thomas M. Floyd and William H. Cook, U.S. Naval Medical Research Unit No. 3, Cairo, Egypt, 1953)

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Communicable Disease Control

The Epidemiology of Intestinal Parasites in Japanese Family Groups

Members of 170 families distributed in four villages in Yamanashi Prefecture, Japan, were examined five times with the formalin - ether technic for intestinal parasites. In these villages, selected because of a high prevalency of protozoa, the incidence of Endamoeba histolytica varied from 13% to 29%. The inhabitants of two of the villages were treated for protozoa, and when they were examined again 7 months later it was noted that E. histolytica had increased from 0.9% to 2.2% in one village and from 1.9% to 4.1% in the other. The untreated villages are being examined over an 18-month period for evidence of spontaneous elimination of protozoa.

Correlation of age with the incidence of amebiasis showed a progressive, though not uniform, increase until age 60, after which there was a decline. Females were more frequently infected than males in a ratio of 1 to 1.53. Examinations of data were made to determine whether the food handler is a primary factor in establishing the high incidence of infection. The occurrence of E. histolytica in families in which the primary food handler was infected has been compared to that in families in

which, although infection occurred, no food handler was infected. A third category of comparison was introduced by selecting one person at random from each family and determining the infection rate for families of those harboring E. histolytica. The data suggests that transmission of E. histolytica by food handlers is not a primary factor in establishing the high rate of infection. Additional studies are being conducted on the various transmission tendencies of intestinal protozoa, including the role played by flies and the effect of contaminated water supplies. (J. Parasitology, August 1954 (Section 2), D. Wykoff, M. Yokogawa, Y. Komiya, S. Sigiura, and L. S. Ritchie, Tokyo, Japan)

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General Sanitation

Physiological Effects of Heavy Chlorination of Drinking Water

The Division of Medical Sciences, National Academy of Sciences, National Research Council, recently released a report by O. J. Muegge on the physiological effects of heavy chlorination of drinking water.

Pertinent paragraphs of the report which are of interest to medical department personnel are excerpted below:

"A rather detailed search has disclosed but little information pertaining to physiological effects of higher-than-normal dosages of chlorine in drinking water. Some authorities contacted in reference to the problem have indicated that a toxic reaction to chlorine concentrations, that might be employed for drinking water disinfection, would be improbable because of the high hydrochloric acid content of gastric juices. Nearly all persons, with whom the matter was discussed, have expressed the opinion that the chlorine concentration in drinking water at the point of refusal would certainly be below the concentration producing adverse physiological effects.

"Experience with chlorination in normal water-works practice indicates that the objectionable concentration varies with the individual, the type of water, and the temperature. Some people react to very low concentrations, beginning with detectable free chlorine residuals, while others are tolerant to the highest concentrations used in water works practice. Experimental work in this area discloses that the point of refusal of the majority of people would occur before the chlorine residual reached 25 ppm, but that some people would tolerate dosages as high as 50 ppm. It is to be anticipated that, in time of stress such as during disaster, the point of refusal, if it is reached, would be at higher concentration levels than those otherwise tolerated.

"Experimental work on toxic concentrations of chlorine appears to be extremely limited. Marks reports that 490 ml. of trichloromelamine (92% titratable chlorine) per kilogram of body weight of mice was lethal (LD₅₀). Chronic toxicity studies on rats, using as much as 1000 ppm of the chloromelamine in the diet, produced no significant effect during a 14-month period. The concentrations used in these studies provide a greater chlorine concentration than those that would be expected in water treatment practice.

"Chlorine, in relatively high concentrations of from 50 to 200 ppm, has been used extensively for disinfection of water wells, mains, and storage units following repair or reconstruction. Occasionally, reports are received that the water is used during such periods for drinking and domestic purposes. At no time, however, have such reports indicated that the high chlorine concentration has resulted in distress to the consumers. Typical of such occurrences is the report by Lowe that, at the time of main disinfection at Fort Bragg, over 150 persons regularly used the water with a chlorine content of 50 ppm. The greatest objection to the chlorinated water came from personnel using the showers.

"Use of water with high chlorine residuals at overseas stations has been reported by Armed Forces personnel. In one case, water with 32 ppm of residual chlorine was used by a group of 200 persons for several months without any adverse effects. Complaints of objectionable tastes were received and most of the group tried to obtain other water. In other cases, water with 15 to 25 ppm of free chlorine was used for shorter periods of time without physical distress. Water with a free chlorine residual of 5 ppm has been used by the Army in Korea for a prolonged period, while the Navy has used 6 ppm residuals on small harbor craft drawing water from unapproved sources. No serious objection has been raised to such residuals.

"The facts presented heretofore indicate that human beings have a substantial degree of tolerance for highly chlorinated water. Further experimentation to determine the extent of tolerance and any adverse physiological effects is recommended."

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Industrial Medicine

Emotional Illness

An improved preventive medicine program in naval industrial activities will result from the early diagnosis of functional disorders. An excerpt from the article, "Solving the Problems of Emotional Illness,"

by N. O. Brill, M. D., appearing in the October 1954 issue of Mental Hygiene, is presented to stimulate interest among naval industrial medicine personnel in the diagnosis of functional medical cases, and, particularly, in the recognition of first-stage symptoms of emotional disorders.

"The concept that a doctor needs to know how to treat the functional case as well as the organic case, still needs to be emphasized; and this is a radical departure from medical traditions of the recent past. The importance of treating a syphilitic infection very early is well accepted. Generally, it is not because the patient is actively or seriously ill at the time, but because all are familiar with what will happen many years later if the patient is not treated. We do not take nearly so seriously the first-stage symptoms of an emotional disorder which later on can develop into a chronic psychosis, or antisocial behavior, or a seriously disturbed patient who passes his or her neuroticism on to future generations . . . it has been repeatedly estimated that approximately one-half of all the patients who visit doctors' offices do so because of emotional rather than organic troubles. Doctors, in general, consider it a disgrace to miss an organic lesion, but somehow do not seem to mind so much missing a functional disorder. Often this will be justified by the attitude, 'you can do something for the patient with organic disease, but little or nothing can be done for the patient with an emotional disorder.' Sometimes one hears the mistaken notion that people do not die from psychiatric illnesses. Actually, much more can be done in the treatment of psychoses or psychoneuroses than can be done to cure multiple sclerosis, polio, and many types of heart disease."

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